

REMARKS

Claims 1-25 are pending in the present application. Claims 21 and 22 are withdrawn from consideration, and the remaining claims 1-21 and 23-25 are rejected. Applicant herein amends claims 4 and 20 to remove the word “such” in each occurrence so that the claims read "... wherein the heating is provided by convection, conduction or radiation." Applicant also combines claim 2 into claim 1 and claim 18 into claim 17 to provide an upper limit to the heating. Applicant further cancels claim 23 without prejudice. As such, upon entry of the instant Amendment, claims 1, 3-17 and 19-22 and 24-25 will be pending.

Double Patenting

The Examiner rejects claims 23 and 24 as substantial duplicates. Applicant herein cancels claim 23 thereby rendering the rejection moot.

Rejection under 35 U.S.C. 112, second paragraph

The Examiner rejects claims 4 and 20 as unclear because of the phrases beginning with “such.” Applicant herein cancels the “such” phrases as this language is not permitted in United States practice. However, it is not believed that the scope of patent protection is adversely affected.

Rejection under 35 U.S.C. 103

The Examiner rejects claims 1-20 and 23-25 as unpatentable over Mitchell, U.S. Patent 4,631,244. The Examiner says that Mitchell teaches all features of the claimed processes except the claimed temperatures. Further, allegedly the claimed temperatures represent mere obvious variations.

Applicant respectfully traverses. The Examiner states that Mitchell teaches the processes of the independent claims of the present invention (*citing*, Column 5, line 25 through Column 6, line 38). Applicant respectfully submits that Mitchell does not teach or

suggest the process of the present invention.

Mitchell teaches using a temperature high enough to liquefy the resin (i.e. above resin T_m), but lower than the decomposition temperature of the carrier. (See, Column 2, lines 38 to 41). In the present invention, heating occurs to or around the T_g (first softening point) of the resin. The goal is to not approach the T_m (second softening point) and thereby liquefy the resin. A definition of first and second softening points is provided on page 9, lines 9 to 14 of the instant specification. Liquefaction of the resin causes irreversible aggregation of the toner dispersions and requires an extra milling/grinding step with particulate media. Such is exactly described by Mitchell. In the present invention, only high speed mixing is used to break up the flocculated network of particles (not irreversibly aggregated) formed from heating the toner to about the T_g. The present invention does not feature grinding or milling as in the process of Mitchell. In the process of Mitchell, the mill with grinding media is heated to above the resin T_m to liquefy the resin. In the present invention, the toner is manufactured without the combination of heating and grinding in the mill. The manufactured toner is then post-treated in a suitable vessel statically and with no grinding at temperatures close to the T_g of the resin but not approaching the T_m, so that the resin is not liquefied.

Applicant also submits that Mitchell uses “polar liquids” as solvents to help solvate the resin during elevated temperature milling. The present invention does not use “polar liquids” to solvate the resin but uses dispersants to stabilize the toner dispersion.

Applicant herein combines claim 2 into claim 1 and claim 18 into claim 17 to provide an upper limit to the heating. As explained, *supra*, Mitchell heats to above the second softening point.

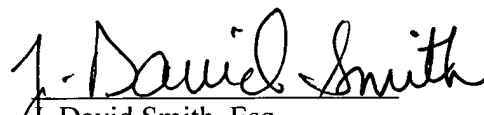
FEES

No fees are believed necessary in connection with the present submission, however, should this be in error, authorization is hereby given to charge Deposit Account No. 11-1153 for any underpayment or to credit any overage.

CONCLUSION

The claims are all believed in condition for allowance and early notification as such is solicited.

Respectfully submitted,


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